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U. S. DEPARTMENT OF AGRICULTURE,

Bureau of Entomology.

NEWS-LETTER

OF

THE

OFFICE OF CEREAL AND FORAGE INSECT
INVESTIGATIONS.

Volume I,

No. 9,

December 1,

1913.

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In the May number of the News-Letter reference was made to the rearing of numbers of *Aphidius testaceipes* by Mr. Urbahns at the Glendale, Cal., station and their consignment to the secretary for the the Crown Agents for the Colonies in London and their further consignment to their destination in British East Africa. It is with considerable regret that we give below a report of Mr. Thomas J. Anderson, Entomologist for British East Africa. The outcome, however, of this experiment will be of interest to all members of the division.

"The consignment of *Aphidius* arrived in June. It is now September and not a single specimen has yet hatched. As soon as the boxes arrived I took the contents out and placed them under glass jars, in the shade, in order to notice when hatching began. I had pots of wheat and other plants ready covered with aphides and on the first signs of hatching I intended to transfer the Wheat with the parasitised aphides to the pots which had gauze covers ready. I have dissected many parasitised aphides and in every case the parasite was dead. The boat was met on its arrival and the box was brought straight here, without being opened at the Coast.

"I know you will be very disappointed and I am very sorry indeed that the trial has not met with success, especially after all the trouble you and Doctor Howard have taken. I do not know what can have happened.

"On the other hand I find aphides here very well parasitised already and *Toxoptera* has not made any headway this last season.

"I must apologize for not answering your last letter sooner but I was hoping against hope that some parasites would hatch and that I could let you have a favorable report."

DEPARTMENT OF AGRICULTURE, OFFICE OF CHIEF CLERK.
WASHINGTON, D. C.

November 18, 1913.

Dr. L. O. Howard, Chief,
Bureau of Entomology.

Dear Sir: I quote below a letter just received from Mr. N. A. Merritt, Washington City Postmaster. Please take such action as is possible without detriment to the public service to comply with Mr. Merritt's request.

Very respectfully,
(Signed) R. M. Reese,
Chief Clerk.

The Chief Clerk of the Department of Agriculture.
Sir:

If not inconsistent with the public service, I beg leave to request that the dispatch of supplies and official printed matter from your Department, both ordinary and registered, be curtailed to the minimum during the period from December 18 to 24, 1913, inclusive, to enable the employees of this office to more satisfactorily cope with the Christmas business, the amount of which I anticipate will be very heavy.

Very respectfully,
(Signed) N. A. Merritt,
Postmaster."

All parasitic or predaceous insects submitted for determination should be accompanied by the name of the host insect, if the same be known. This is necessary for the information and guidance of the person making determinations and will aid materially in securing them promptly.

When determinations are received at field stations they should at once be entered on the notes. This becomes of especial importance in case the notes have not been submitted to this office for copying, for the reason that an omission to enter such determinations may cause endless complications and confusion when, perhaps years afterwards, the notes are worked over for the purpose of publication.

In the dry air of the Southwest one loses but few specimens from mold even when material is tightly corked in glass vials. I refer to material that is reared and preserved unmounted. But I find that in the more humid air of the Mississippi Valley insects so preserved are apt to mold in a very short time. For years, in field work, I have been using gelatine capsules and find them admirably adapted for the purpose of keeping unmounted insects. They are light, unbreakable, transparent enough so that labels can be read through the gelatine, and the capsules appear to absorb the surplus moisture from the insects within so that they have never molded, so far. I use the No. 00 size, and in a properly managed drug store these should be bought for 10 cents per hundred. It may be that in the still more humid air of the Gulf States these capsules will suffer from excess of moisture, for of course they are sensitive to humidity and easily dissolved. Experience alone would settle the question of their use in Southern surroundings. C. N. AINSLIE

For a good many years I have been looking for some medium that would be perfectly adapted for use in mounting soft-bodied larvae, such as those of *Isosoma*, for microscopic study. For many such objects, glycerine is an ideal medium, except that it tends to make tissue too transparent, and, being a solvent of certain minerals and gums, it is often difficult to seal it permanently.

Glycerine jelly is good, but not easy to manipulate, and possibly not well adapted for general microscopic mounting, although an admirable medium for the preservation of tissue, both animal and vegetable.

For thirty years and more I have experimented with Farrant's Medium (gum, glycerine, and water), and sometimes it affords mounts of unexpected beauty and value. Recently I have been using this compound for mounting small larvae of *Diptera*, and the like, and although there is a slight shrinkage there is not the general mummification that Canada balsam nearly always produces. The medium penetrates the tracheae slowly, if at all, while striated muscle shows finely for some time. I put the living larvae directly into the Medium and there is no cloudiness afterwards as with balsam. Air bubbles are easily acquired in this medium, and they do not disappear as in balsam, but these can be avoided, as they can in Glycerine jelly, if one knows how.

Can any of the men suggest any other medium that will preserve these larvae in better condition than Farrant's? I want one that will do for hymenopterous eggs and the most delicate objects, and am still in search of a perfect mountant. C. N. AINSLIE.

Mr. V. L. Wildermuth is spending some weeks in the Washington office engaged in the preparation of manuscripts for publication.

Among the callers at the office during November were Prof. C. P. Gillette, Ft. Collins, Colo., Prof. S. B. Doten, Reno, Nevada, and Dr. C. R. Ball, Logan, Utah.

The faculty of Iowa State College has under consideration the matter of establishing a course in entomology tending to fit men for Government and experiment Station positions.

The entomological paper in No. 2, Vol. I, Journal of Agricultural Research, is by Mr. W. Dwight Pierce, the title being "The Occurrence of a Cotton Boll Weevil in Arizona."

To prevent waterproof ink from running in a diluted alcohol solution, the label should be saturated with absolute alcohol, and allowed to dry before placing in the weaker alcohol solution.

T. D. URBAHNS.

Mr. R. J. Kewley has been transferred from Salt Lake City, Utah, to La Fayette, Ind. Mr. Harrison E. Smith has returned from Koehler, New Mexico to Wellington, Kans., while Mr. D. J. Caffrey is working over the eastern portion of the former State in continuation of the range caterpillar investigations.

A convenient formula for diluting solutions, such as alcohol, from a given strength to some other desired strength is as follows:

$$\frac{100}{\text{Desired strength}} \times \frac{\text{Quantity to be changed}}{1} \times \frac{\text{Present strength}}{100} = \text{Total amt.}$$

Example.--To reduce 20 cc. of 95% alcohol to 70% alcohol solution:

$$\frac{100}{70} \times \frac{20}{1} \times \frac{95}{100} = 27.1 \text{ (add water to make 27.1 cc.)}$$

T. D. URBAHNS.

There has recently been discovered among the files in the Bureau of Entomology a considerable number of sets of illustrations struck from copper plate engravings originally made for the Loew and Osten Sacken Monograph of North America diptera. These belong to Volume III, Dolichopodidae, Plates III-VII inclusive; Ortalidae and Trypetidae, Plates VIII-XI inclusive.

Also complete sets of uncolored plates from de Sassure's North American Vespidae, Smithsonian Misc. Coll. No. 254. All of these plates are beautifully drawn and engraved and should be of value to students and others interested in the orders Hymenoptera and Diptera. They will be distributed free of charge to all who apply for them to the U. S. Bureau of Entomology, Washington, D. C.

For the purpose of this investigation, the following data were collected from the records of the Department of the Interior, Bureau of Land Management, for the years 1900 to 1909.

The following table shows the number of acres of land acquired by the United States for each year, and the total number of acres acquired during the period.

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